

SEGMENTED CONTENT ADDRESSABLE MEMORY ARCHITECTURE FOR IMPROVED CYCLE TIME AND REDUCED POWER CONSUMPTION

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ABSTRACT OF THE DISCLOSURE

A content addressable memory ("CAM") system includes a plurality of segments arranged in an array, wherein each of the plurality of segments includes a plurality of CAM cells, each of the plurality of CAM cells includes a wordline, a matchline and a sinkline, the wordline being shared by all of the
10 cells in the same row, the matchline and sinkline being shared by all of the cells in the same segment; and a corresponding method of searching within a CAM system includes providing an input word to the CAM system, comparing a portion of the input word in a segment of the CAM system, and propagating a mismatch to obviate the need for comparison in other segments of the CAM
15 system.